

METHOD AND SYSTEM FOR PROCESSING
POSITIONING SIGNALS IN A STAND-ALONE MODE

ABSTRACT OF THE DISCLOSURE

A method for processing positioning signals in a ranging receiver in a stand-alone mode is provided. The method includes collecting pseudorange samples from positioning signals received at the ranging receiver from a plurality of satellites. The pseudorange samples comprise message data modulation. Each satellite has an associated Gold code. A previously determined carrier frequency offset (CFO) is selected from a plurality of directly extracted CFOs. The pseudorange samples are compensated for the selected CFO. The message data modulation is removed from the pseudorange samples. The pseudorange samples are stacked for each satellite. The Gold code associated with each satellite is correlated to generate a pseudorange time sequence for the satellite. A determination is made regarding whether an adequate correlation peak exists in each pseudorange time sequence. A pseudorange is determined for the ranging receiver based on the correlation peaks when an adequate correlation peak exists in each pseudorange time sequence.